



Attorney Docket No. 110578-135407  
Intel P16231

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Application of:

Mader, et al.

Application No.: 10/748,632

Filed: December 30, 2003

Confirmation No.: 6893

For: OPTICAL COMMUNICATIONS  
ADAPTOR MODULE

Examiner: Dupuis, Derek L.

Group Art Unit: 2883

Customer No.: 31817

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: 5-25-04

Typed or Printed: Sally Hawk

Signature: Sally Hawk

Date: 5-25-04

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**Declaration of Inventors Pursuant to 37 C.F.R. § 1.131**

Sir:

I, Thomas B. Mader, hereby declare that:

1. I am a citizen of the United States of America, and at the time of conceiving and reducing to practice the above identified invention was residing in the State of California, in or around the greater San Francisco Bay area.
2. I am the first named inventor of the subject matter of the above-captioned application, as originally declared on or around December 29 2003 in the combined declaration and power of attorney, filed on or around December 30, 2003.
3. I am employed by Intel Corporation of Santa Clara, California, the assignee. Intel Corporation is an internationally recognized company that files well over two thousand patent applications annually.

4. To the best of my recollection and as refreshed by attached **Exhibit I**, the subject invention was conceived on or prior to June 14, 2002. **Exhibit I** is a photocopy of an Inventor Disclosure Form dated 6-14-02.

6. I additionally declare that I worked diligently with my colleagues in the Intel Legal department and our outside patent counsel from at least prior to July 23, 2003, until the filing date of the above-captioned application on December 30, 2003, to constructively reduce my invention to practice with the filing of the above-captioned application. This diligence is supported by the fact that the Inventor Disclosure Form (**Exhibit I**) describing the subject matter of the above-captioned application was submitted to Intel's PPG/Networking Patent Committee on or around October 8, 2002, as indicated in the attached **Exhibit II** which is a copy of an internal website from Intel's Legal Department called "Patent Database Information Center". (Portions not relevant to this case have been redacted.) The Patent Committee then reviewed and selected for filing the above-captioned application, and others, from among several hundred disclosures that the Patent Committee typically receives each quarter. My employer, Intel Corporation (assignee of the application), processes from around 5000 to around 7500 such Invention Disclosure Forms submitted each year, and in committees, that meet quarterly, they select for filing from among those submitted about 2500 each year. The selection, and prioritization includes selection of outside council to prepare the applications. Regarding the above-captioned case, my employer, Intel Corporation, duly retained the services of the law firm of Schwabe, Williamson & Wyatt, which in turn duly assigned one of their patent counsels on or around November 6, 2003, to draft the subject patent application, which eventually led to the filing on December 30, 2003, after at least two draft iterations which the other inventors and I reviewed and after a standard quality review by the Intel Legal department. The November 6, 2003 date is established by **Exhibit III** which is a new client matter form from the law firm of our patent counsel, Schwabe, Williamson & Wyatt.

**I further declare that all statements made herein of my own individual knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-identified patent application or any patent issued thereon.**

Executed by and on the date(s) as set forth below:

By: Thomas B. Mader

Date: 5/22/06

Thomas B. Mader

**INTEL INVENTION DISCLOSURE**  
**ATTORNEY-CLIENT PRIVILEGED COMMUNICATION**  
 located at <http://legal.intel.com/patent/index.htm>

**27946**DATE: 6-14-02**TMG-TM/ICG/OPG/OPD**

It is important to provide accurate and detailed information on this form. The information will be used to evaluate your invention for possible filing as a patent application. **Invention Disclosure forms MUST be sent electronically via email to your manager/supervisor who should then forward with their approval to our email account "Invention disclosure submission."** If you have any questions, please call 8-264-0444.

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Corporate Level Group: ICG	Division: OPG	Subdivision: OPD
Supervisor: Dan Sweeney	WWID: 10034224	M/S: TB1
		Phone #: 510-578-5637

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City: SUNNYVALE	State: CA	Zip: 94087
Corporate Level Group: ICG	Division: OPG	Subdivision: OPD
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Last Name: OEN	First Name: JOSHUA	M.I. T
Intel Phone Number: 510-578-5628	Intel Fax Number: 510 578-59-28	Mailstop: TB2
E-mail address: JOSHUA.OEN@INTEL.COM		WWID: 10965339
Citizenship: USA	Are you a contractor? Yes:	No: XXXXXXXXXX
Home Address: 894 BARCELONA DRV		
City: FREMONT	State: CA	Zip: 94536
Corporate Level Group: ICG	Division: OPG	Subdivision: OPD
Supervisor: STEVE BUCHHEIT	WWID: 10965253	M/S: TB2
		Phone #: 510 578-5610

**EXHIBIT I**  
 Page 1 of 4

**(PROVIDE SAME INFORMATION AS ABOVE FOR EACH ADDITIONAL INVENTOR)**

2. Title of Invention: OPTICAL XPAK TO XENPAK ADAPTER

3. What technology/product/process (code name) does your invention relate to (be specific if you can)

Related product name Xenpak & Xpak

4. Include several key words to describe the technology area of the invention in addition to # 3 above:  
Xpak MSA , Xenpak MSA , 10gig transponder,

5. Stage of development (i.e. % complete, simulations done, test chips if any, etc.):  
Product currently in conceptual stage

6a. Has a description of your invention been (or planned to be) published outside of Intel: Not at this time

If YES, was the manuscript submitted for pre-publication approval through the Author Incentive Program:

If YES, please identify the publication and the date published:

6b. Has your invention been used/sold or planned to be used/sold by Intel or others? Planned to be released

If YES, date it was sold or will be sold: Alpha samples in November, 2002 time frame

6c. Does this invention relate to technology that is or will be covered by a SIG (special interest group)/standard or specification?

No

If YES, name of SIG/standard/specification:

6d. If the invention is embodied in a semiconductor device, actual or anticipated date of tapeout?

Not applicable

6e. If the invention is software, actual or anticipated date of any beta tests outside Intel:

Not applicable

7. Was the invention conceived or constructed in collaboration with anyone other than an Intel blue badge employee or in performance of a project involving entities other than Intel (e.g. government, other companies, universities or consortia)? NO: NO If YES, name of individual or entity:

8. Is this invention related to any other invention disclosure that you have recently submitted? If so, please give the title and inventors: NO

**PLEASE READ AND FOLLOW THE DIRECTIONS ON  
HOW TO WRITE A DESCRIPTION OF YOUR INVENTION**

Try to limit your description to 2-3 pages  
Do NOT attach a presentation, white paper, or specification  
ANSWER ALL OF THE QUESTIONS BELOW

EXHIBIT I  
Page 2 of 4

Please provide a description of the invention and include the following information:

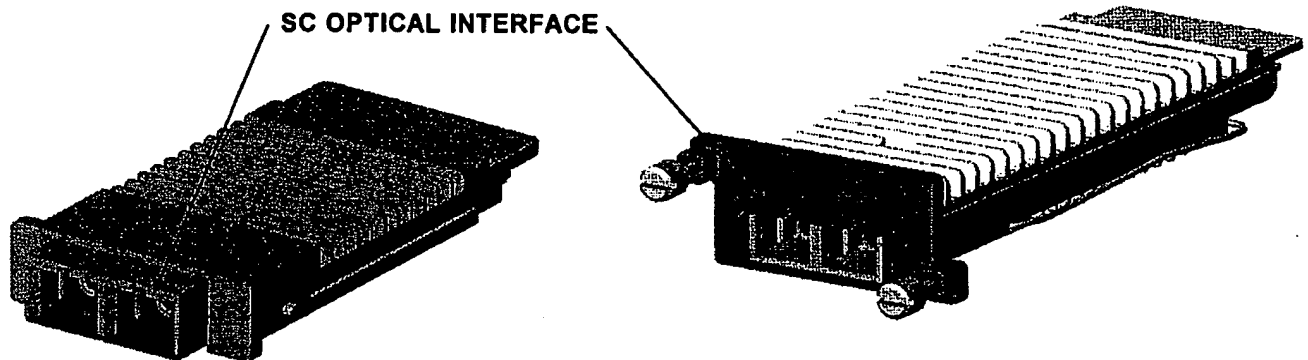
1. Describe in detail what the components of the invention are and how the invention works.  
Currently the Xenpak and Xpak modules are designed independently without any interchangeability of parts. The proposed concept is to make the functionality of the PC board

assembly be adaptable to both products and change the mechanical features in order to satisfy both product requirements. The proposed concept will allow a PC board assembly from the Xpak to be used in the Xenpak Transponder. The PC board assembly is designed to fit the Xpak module, but for the Xenpak module the same PC board assembly will create an incorrect position of the Optical interface. The key in allowing the transformation of a Xpak PC board to be used in a Xenpak is an Optical Patchcord. The Optical patchcord is the equivalent of an electrical extension cord and can allow the outside connector interface to be at a different location with respect to the PC board mounted optics.

2. **Describe advantage(s) of your invention over what is currently being done.**

The advantage of having a common PC board assembly is, reduced part cost, same basic assembly process, testing and qualifying protocol can be consolidated, common programming scheme, product characteristics are similar for customer...etc.

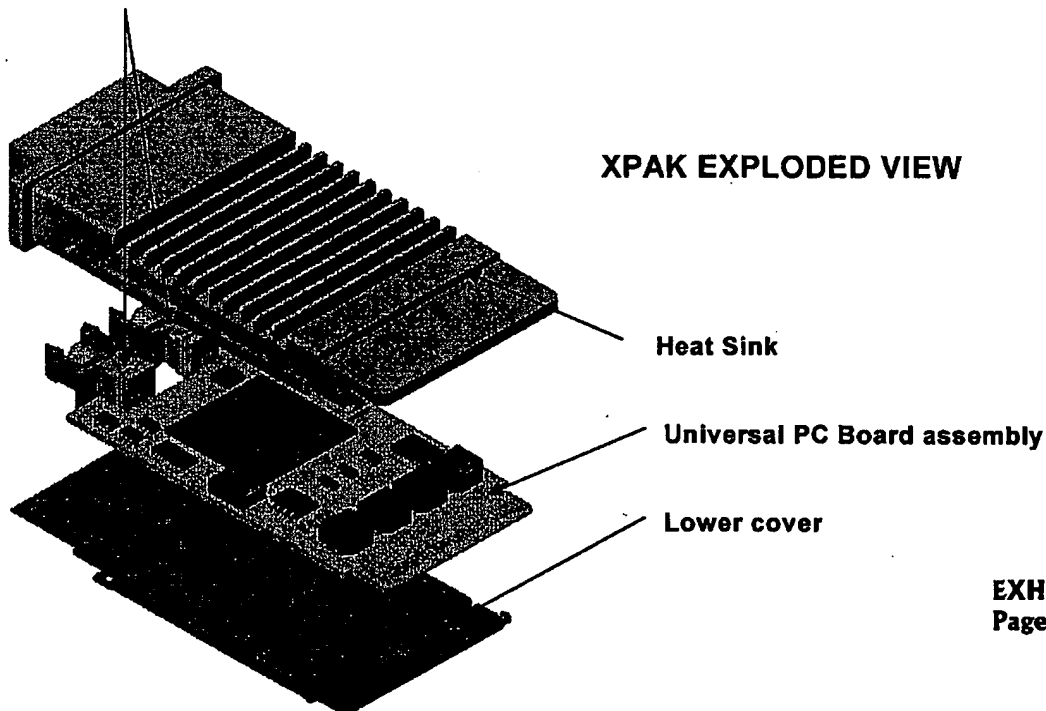
3. **You MUST include at least one figure illustrating the invention. If the invention relates to software, include a flowchart or pseudo-code representation of the algorithm.**



**XPAK 10Gbits / Transceiver**

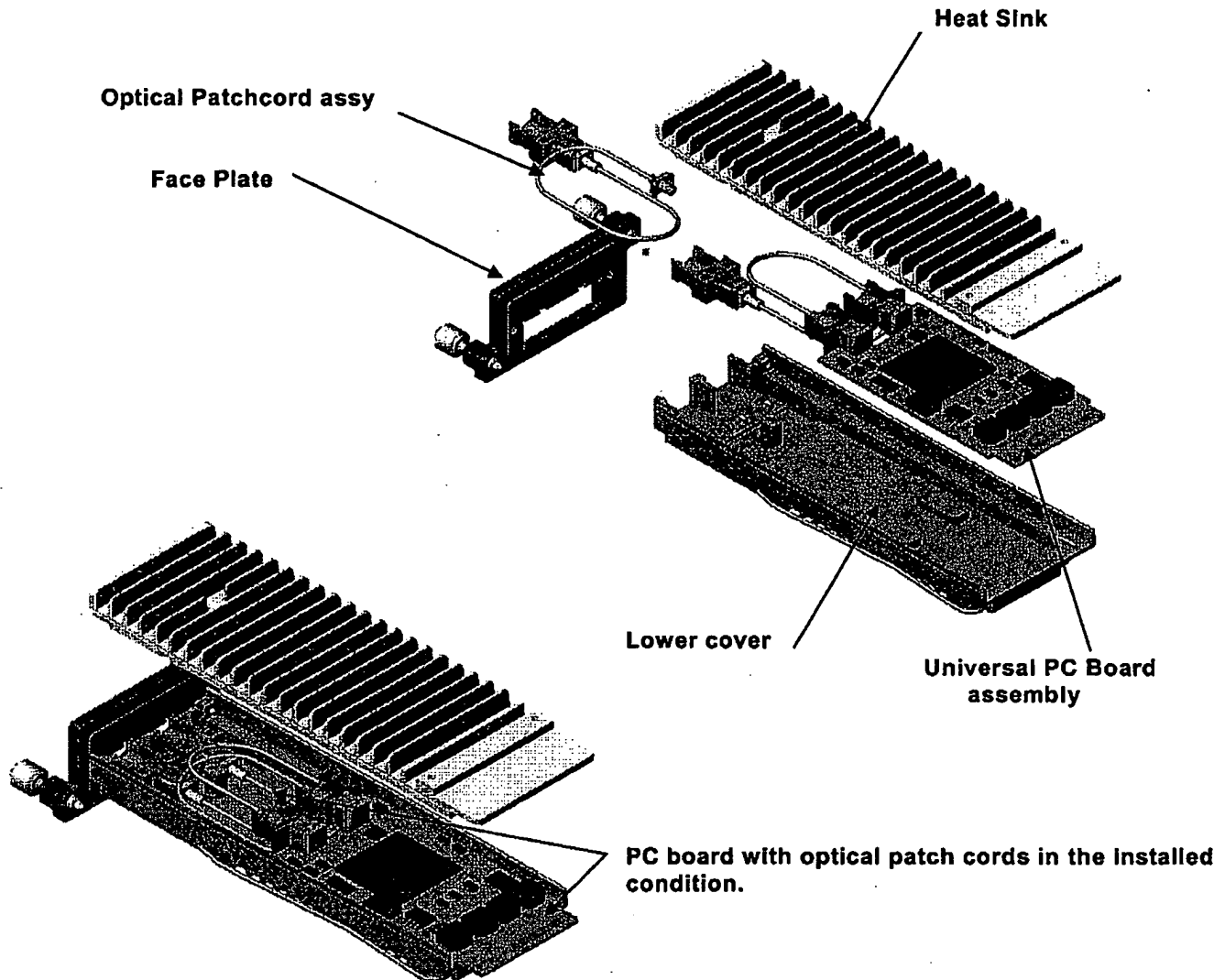
**XENPAK 10Gbits / Transceiver**

**PC BOARD MOUNTED OPTICS**



**XPAK EXPLODED VIEW**

# XENPAK EXPLODED VIEW



4. **Value of your invention to Intel (how will it be used?).** By satisfying the two different markets with one solution (internally) Intel can eliminate most of the development cost of a new product.
5. **Explain how your invention is novel. If the technology itself is not new, explain what makes it different.** Currently the industry solves this type of problem by developing two different solutions for two products. This proposal will allow two different products to share a common core part, the PC board assembly.
6. **Identify the closest or most pertinent prior art that you are aware of.** None that we are aware of.
7. **Who is likely to want to use this invention or infringe the patent if one is obtained and how would infringement be detected?** Our competitors, Picolight, Infineon, JDSU, Agere, Mitsubishi, Hitachi and other transponder manufacturing companies

**HAVE YOUR SUPERVISOR READ AND FORWARD IT ELECTRONICALLY VIA E-MAIL TO "INVENTION DISCLOSURE SUBMISSION"**

**EXHIBIT I**  
**Page 4 of 4**

DATE: \_\_\_\_\_ SUPERVISOR: \_\_\_\_\_

BY APPROVING, I (SUPERVISOR) ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS DISCLOSURE, AND RECOMMEND THAT THE HONORARIUM BE PAID

Legal Web Site - Patent Database Information Center - Microsoft Internet Explorer

Address: http://legal.intel.com/Patent/PatentSearch.asp?pat=10156449

Patents

Intel - Overview

- 1 American Express Intel Travel...
- 2 CIS Product Decoder
- 3 Grant [For Employees/Intel]
- 4 Database Patent Grant and P...
- 5 EB calculation
- 6 ePurchasing Intel
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- 9 Home - mPurchasing
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- 11 Intel Authorized Shipping Memo
- 12 Intel Communications Group M...
- 13 Intel management courses
- 14 Intel Work Week Calendar 200...
- 15 ISS Home
- 16 IT Product Catalog
- 17 LoadFree at Intel
- 18 Legal Web Site - Confidential In...
- 19 Legal Web Site - Patent Practice
- 20 Light lock Internet Home Page
- 21 My Expert
- 22 CPU Home
- 23 SPEED-Online
- 24 To repair a damaged Personal...
- 25 Visitor - Login
- 26 VGA
- 27 Personal
- 28 Test equipment

Page 1 of 1  
EXHIBIT II

TM&THERMOMECHANICAL 38857	5/7/2001	PUBLISHED	NO
OPTICAL/MEMS 28831	11/23/2002	PENDING	NO
OPTICAL/MEMS 27878	10/16/2002	ISSUED	NO
CIRCUITS 37971	10/15/2002	DECLINE	
OPTICAL/MEMS 27837	10/6/2002	DECLINE	
OPTICAL/MEMS 27946	10/6/2002	PENDING	NO
		OPTICAL XPAK TO XENPAK ADAPTER	
TM&THERMOMECHANICAL 38852	7/15/2002	PUBLISHED	
OPTICAL/MEMS 21732	9/14/2001	PENDING	NO

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# New Client / Matter Form

Page 1

Date	11/6/2003	<input type="radio"/> NEW CLIENT	Client	110578
Prepared By:	af	<input checked="" type="radio"/> EXISTING CLIENT	Matter	110578-135407

## CLIENT INFORMATION

Client Model: *			
Client Name 1: *	INTEL LEGAL - PPG/OPTICAL-MEMS		
Client Name 2:			
Address Line 1: *	INTEL CORPORATION		
Address Line 2:	DAVID SIMON		
Address Line 3:	CHIEF PATENT COUNSEL		
Address Line 4:	C/O MALOU DE LEON, SC4-203		
Address Line 5:	2200 MISSION COLLEGE BLVD		
Address Line 6:	SANTA CLARA, CA 95052		
City:	SANTA CLARA	State:	CA
Postal Code:	95052	Country:	
International Prefix No:		Phone No:	(408) 765-6886
		Fax No:	
SS/Tax ID:			
Contact Name:			
Contact Title:			
Contact Email Address:			
Domestic / International:	<input checked="" type="checkbox"/> D	Add To Timekeeper's Contact List:	<input type="checkbox"/>

Notes: NEED C/M and file on a RUSH BASIS, PLEASE. Please only create a trifold with side colored barcode sticker and white barcode sticker on it. Check file out to supervising attorney, but deliver to me. Thanks. - Allison Fahl

WFM\_1018

EXHIBIT III  
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